Remarks

Claims 1-13 and 15-23 are pending in the present application. Claims 1-13 and 15-19 are rejected and claims 20-23 are withdrawn. By the present amendment, claim 1 is amended and new claim 24 is added.

Rejections Pursuant to 35 U.S.C. §102(b)

In the Office Action, claims 1-5 and 7-13 are rejected under 35 U.S.C. §102(b) as being anticipated by Ullman (U.S. Patent No. 5,445,944).

Claim 1 is amended herein and recites a method for detecting an analyte by a redox reaction and a fluorimetric determination, comprising contacting a sample containing the analyte with a detection reagent. The detection reagent contains a compound of the general formula Q – F as a fluorimetric redox indicator, wherein Q is a quencher group and F is a fluorophore group. The detection reagent additionally contains an enzyme for reducing or oxidizing the analyte and optionally a coenzyme. Support for this amendment can be found at page 4, lines 12-15 of the application. No new matter has been added.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Ullman describes a method for determining peroxidatively active substances such as peroxidases, which method comprises contacting a sample containing the analyte to be determined with a hydroperoxide, a hydrogen donor and a compound of the general formula F-L-Q, wherein F is a fluorescer capable of producing a signal, Q is a quencher capable of quenching the signal when linked to F, and L is a bond or a linking group having a bond. More specifically, the method comprises oxidizing a hydrogen donor by reacting the hydrogen donor with a hydroperoxide in the presence of a peroxidatively active substance, as a result of which the oxidized hydrogen donor causes cleavage of

the bond between F and Q and thus increases the fluorescence of the fluorescer group F.

Also in the Office Action, claims 1-3, 5 and 8-13 were rejected under §102(b) as being anticipated by Lee (U.S. Patent No. 5,795,729). Lee describes a method for fluorometrically detecting an analyte in a sample using a probe, the probe comprising a fluorescent reporter molecule and a quencher molecule, wherein the quencher molecule is converted by the analyte from a first state which is able to quench the fluorescence of the reporter molecule, to a second state that has a reduced ability to quench the reporter molecule. As can be derived from col. 5, lines 5-11 of Lee, the analyte is preferably an enzyme such as peptidase, a phosphorylase, an oxidase or a reductase.

Neither Ullman nor Lee describe the subject matter of amended claim 1. More specifically, neither patent reference is directed to a method for detecting an analyte by a redox reaction and a fluorimetric determination comprising contacting a sample containing the analyte with a detection reagent, which detection reagent contains (a) a compound of the general formula Q-F as a fluorimetic redox indicator, wherein Q is a quencher group and F is a fluorophore group, and (b) an enzyme for reducing or oxidizing the analyte and optionally a coenzyme. In the method defined by claim 1, both the analyte to be determined and an enzyme for reducing or oxidizing the analyte are present in the detection mixture. There is no identity between the analyte and enzyme. In contrast, Ullman and Lee disclose methods in which an enzyme itself is analyzed, i.e., there is an identity between analyte and enzyme.

Ullman and Lee cannot be relied upon in support of the instant rejections. Claims 2-5 and 7-13 contain all of the limitations of the base claim from which they depend. Accordingly, applicants respectfully request the rejection be withdrawn.

The Examiner's stated position on page 5 of the Office Action is that the claims are directed to a detection reagent which contains an enzyme where no function for that

enzyme is claimed, and that Ullman and Lee teach a detection agent where an enzyme is present whether or not the enzyme is part of a detection agent. Claim 1 is amended herein and defines a method for detecting an analyte by a redox reaction and a fluorimetric determination comprising contacting a sample containing the analyte with a detection reagent containing, *inter alia*, an enzyme for reducing or oxidizing the analyte, and optionally a coenzyme.

Moreover, new claim 24 is added herein, which defines a method for detecting an analyte by a redox reaction and a fluorimetric determination, comprising contacting a sample containing the analyte with a detection reagent containing a compound of the general formula Q – F as a fluorimetric redox indicator, wherein Q is a quencher group and F is a fluorophore group; reducing or oxidizing the analyte with the enzyme; irradiating the sample with excitation light of a predetermined wavelength; and detecting the fluorescence emission light emitted by the sample having a wavelength that differs from the predetermined wavelength. Support for the instant amendments appear in the application as originally filed. No new matter has been added.

Rejections Pursuant to 35 U.S.C. §103(a)

Also in the Office Action, claims 6 and 15-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ullman. As stated in the Office Action, claim 6 differs from Ullman in that the listed quenchers are not specifically described, and the analytes in claim 15 are not shown by Ullman. However, in support of the instant rejection, it is asserted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any known quenchers for their known function in view of Ullman who describes a number of quenchers and that any known quenchers can be employed – no unexpected results are seen. Moreover, regarding the analytes in claim 15, it is asserted Ullman describes an assay that determines peroxidatively related or active substances broadly, and all the analytes in claim 15 can be determined in a reaction where peroxide is generated and determined.

To establish a *prima facie* case of obviousness, *inter alia*, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Claims 6 and 15-19 ultimately depend from claim 1 and, as noted above, Ullman does not teach or suggest the subject matter of amended claim 1 - contacting a sample containing an analyte with a detection reagent, which detection reagent contains an enzyme for reducing or oxidizing the analyte and optionally a coenzyme. Ullman further does not disclose the subject matter of new claim 24 - a method for detecting an analyte by a redox reaction and a fluorimetric determination, comprising contacting a sample containing the analyte with a detection reagent containing a compound of the general formula Q – F as a fluorimetric redox indicator, wherein Q is a quencher group and F is a fluorophore group; reducing or oxidizing the analyte with the enzyme; irradiating the sample with excitation light of a predetermined wavelength; and detecting the fluorescence emission light emitted by the sample having a wavelength that differs from the predetermined wavelength. Ullman cannot therefore be relied upon in support of the instant rejection. If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. MPEP 2143.03 (*citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). Accordingly, applicants respectfully request that the rejection be withdrawn.

Conclusion

Applicants have filed a complete response to the outstanding Office Action and respectfully submit that, in view of the above amendments and remarks, the application is in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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